

REMARKS

In an Office Action dated March 22, 2007, the Examiner rejects claims 31-34- 37-38 and 40-52. In response to the Office Action, Applicants respectfully traverse the rejections. Claims 31-34-37-38 and 40-52 remain in the Application. In light of the following arguments, Applicants respectfully request that this application be allowed.

In the Office Action, the Examiner rejects claim 31 under 35 U.S.C. §103(a) as being obvious from U.S. Patent Number 5,284,492 issued to Dublin (Dublin) in view of U.S. Patent Number 3,756,794 issued to Ford (Ford), WO published application 95/27021 on behalf of Gunnerman (Gunnerman) and U.S. Patent Number 5,669,938 issued to Schwab (Schwab). In order to maintain a rejection the Examiner has the burden of providing evidence of *prima facie* obviousness. See MPEP §2143. See also In Re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In order to prove *prima facie* obviousness, the Examiner must provide evidence in the prior art of a motivation to combine or modify a reference, a reasonable expectation of success, and a teaching of each and every claimed element. Id. The Examiner has failed to provide references that teach each and every claimed element of amended claim 31 or a proper motivation to combine the references.

Specifically, Applicants maintain that Dublin does not teach the emulsion recited in claim 1 because Dublin does not teach a neutralizer and acid that react to form a water soluble salt. Dublin teaches that the di- and tri-acids are part of a group that may be added to the fuel to increase lubricity. See Col. 7, lines 15-22. The Dublin fuel takes advantage of the fact that the Diels-Alder reaction generates mono-, di-, and tri- acids. Furthermore, Dublin gives the preferred percentages of such acids by stating that a lubricity agent should be present at a level of about 1500 ppm to about 3500 ppm. See

Col. 8, lines 40-45. Claim 31, on the other hand, requires that the acids react with the neutralizer to form a water soluble salt in the emulsion. This is to allow the neutralizer and corrosion agent to be used in the high temperature of an internal combustion engine. In order to form the salt, the neutralizer should be substantially .05%-.4% by weight of the emulsion and the coupling agent should be .04%-.1% by weight of emulsion. As can be seen from examples 1-4 in the specification, where the neutralizer (AMP-95) is present at about 600 ppm and the coupling agent (Diacid) is present in the amount of about 400 ppm when the compounds are present in the recited ranges by weight of the emulsion. Thus, both the neutralizer and coupling agents are present in substantially less amounts than the amounts taught in Dubin. For these reasons, Applicants again set forth that the rejections can not be maintained for the following reasons.

Claim 31 recites an emulsion having additives including a neutralizer being substantially .05%-.4% by weight of said fuel emulsion wherein said neutralizer reduces corrosion caused by acids in said fuel emulsion, and a coupling agent substantially .04%-.1% by weight of said fuel emulsion wherein said coupling agent maintains phase stability of said fuel emulsion at high temperatures and shear pressures of an internal combustion engine wherein said coupling agent is a one selected from a group consisting of: a di-acid of the Diels-Alder adducts of unsaturated fatty acids and a tri-acid of the Diels-Alder adducts of unsaturated fatty acids and wherein said neutralizer combines with a select acid to form a water soluble salt. None of the cited references teach these limitations. Although Dubin teaches the use of di- and tri- acids as created for use as lubricity enhancers, the di- and tri- acids are oil soluble. See Col. 7, lines 15-65. Furthermore, these are present in substantially higher levels of 1500 to about 3500 ppm which greatly increases the percent by weight of di- or tri acids in the emulsion. See

Col. 8 lines 40-50. Thus, these di- and tri acids taught in Dubin are not useful at the high temperatures and sheer pressures in an internal combustion engine.

As is clear from the abstract of Dubin, the disclosed fuel is for a turbine engine. Thus, the Dubin fuel does not need to withstand the same pressures or high temperatures as the emulsion as recited in claim 31. All of the other references do not disclose the use of di- or tri-acids as recited in claim 31 and are merely added to include various other additives into the emulsion. Thus, the neutralizer and coupling agent recited in claim 31 are not taught by the references provided by the Examiner. Therefore, Applicants respectfully request that the rejection of claim 31 be removed and claim 31 be allowed.

Claims 32-34, 37-38, and 40-52 are dependent from claim 31. Thus, claims 32-34, 37-38, and 40-52 are allowable for at least the same reasons as claim 31. Therefore, Applicants respectfully request that the rejections of claims 32-34, 37-38, and 40-52 be removed and claims 32-34, 37-38, and 40-52 be allowed.

If the Examiner has any questions regarding this application, the Examiner may telephone the undersigned at 775-586-9500.

Respectfully submitted,  
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